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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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CHRISTIE, PARKER & HALE, LLP
PO BOX 7068
PASADENA, CA 91109-7068

EXAMINER

PEREZ DAPLE, AARON C

ART UNIT PAPER NUMBER

2154

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/825,851

Applicant(s)

FISCHER ET AL.

Examiner

Aaron C Perez-Daple

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/10/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to Application filed 4/4/01.
2. Claims 1-11 are presented for examination.
3. This Action is non-Final.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 5 and 6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention
6. As for claim 5, lines 6-7 of the claim recite “additional received timestamp report message pairs.” The use of the term “additional” implies that prior received timestamp report message pairs have been recited. However, no such recitation is found. Therefore, the term lacks proper antecedent basis.
7. As for claim 6, lines 8-10 recite “the time required for the master node to receive, process and forward packets from the slave node to the synchronous network.” Because the slave node must transmit the packets to the master node via the synchronous network (i.e. the master node does not act as an intermediary between the slave node and the synchronous network), it is not clear to the Examiner what time is being claimed. Moreover, it is unclear how such a time could be subtracted from an “opportunity.” Rather, it would appear that the time must be subtracted from a time associated with said opportunity. For the purpose of

applying prior art, the Examiner interprets that any teaching of subtracting a time for processing by the master node meets the limitation of the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-3 and 9** are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson et al. (US 5,974,056) (hereinafter Wilson).
10. As for claim 1, Wilson discloses a method of providing synchronous transport of packets between asynchronous network nodes, each asynchronous network node having a local clock and transmitting and receiving packets to and from the asynchronous network according to an asynchronous network media access protocol, comprising:
- designating as a master node an asynchronous network node capable of transmitting and receiving packets on the asynchronous network (col. 1, line 51 – col. 2, line 6);
- designating as a slave node each non-master asynchronous network node which desires to synchronously transport packets across the asynchronous network as a slave node (col. 1, line 51 – col. 2, line 6);

synchronizing a master node clock of the master node with a slave node clock of each slave node (col. 2, lines 7-36);

determining at the master node, a best arrival time for the reception by the master node of each particular packet transmitted by each particular slave node (col. 2, lines 7-36);

communicating from the master node to the slave nodes best arrival times for packets transmitted from slave nodes to the master node (col. 2, lines 7-36);

determining at each slave node best packet assembly times for packets to be transmitted by the particular slave node to the master node in the future in order for the packets to be received by the master node at future master clock referenced best arrival times (col. 2, lines 7-61);

continuously correcting each slave node clock compared with the master node clock to smooth slave clock error to an average of zero compared with the master clock as a reference in response to a message from the master node (col. 2, lines 7-61);

preparing packets for transmission at slave nodes according to determined future best packet assembly time information (col. 2, lines 7-61); and

transmitting packets at slave nodes according to the determined future best packet assembly time information (col. 2, lines 7-36).

11. As for claim 2, Wilson discloses the method of claim 1, wherein the step of designating a master node is determined by assessing an ability of an asynchronous node to directly access synchronous network timing information (col. 1, line 51 – col. 2, line 6).

12. As for claim 3, Wilson discloses the method of claim 2, wherein an asynchronous network node with direct access to synchronous network timing information is designated the master node (col. 1, line 51 – col. 2, line 6).
13. As for claim 9, Wilson discloses the method of claim 1, wherein preparing packets for transmission at slave nodes according to the determined future best packet assembly time information includes assembling a set of continuously generated data into a series of single packets so that a time from a collecting of last data to be assembled for a given packet corresponds to a best packet assembly time from the series of best packet assembly times (col. 2, lines 7-61).
14. **Claim 11** is rejected under 35 U.S.C. 102(e) as being anticipated by Burns et al. (US 6,449,291 B1) (hereinafter Burns).
15. As for claim 11, Burns discloses in an asynchronous communications network having a master node and one or more slave nodes, a method of synchronizing a master node clock of the master node with a slave node clock of each slave node, comprising:
 - sending timestamp report messages in pairs from the master node to slave nodes at periodic intervals (col. 4, lines 17-60) by:
 - sending a first timestamp report message from the master node to the slave nodes (col. 4, lines 17-39; col. 11, line 13 – col. 12, line 13);
 - recording master timestamp information at the master node at a defined time during transmission of the first timestamp report message of a pair corresponding to the transmission of the first timestamp report message of a pair (col. 4, lines 17-60; col. 11, line 13 – col. 12, line 13); and

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sending a second timestamp report message from the master node to the slave nodes which contains the master timestamp information (col. 4, lines 40-55; col. 11, line 13 – col. 12, line 13);

receiving timestamp report messages in pairs by the slave nodes from the master node (col. 4, lines 40-55; col. 11, line 13 – col. 12, line 13) by:

recording a slave timestamp at the slave nodes at a fixed time during reception of each timestamp report message to provide a recorded timestamp of the first timestamp report message at the slave nodes (col. 11, line 13 – col. 12, line 13);

comparing the recorded timestamp of the first timestamp report message of each pair at the particular slave node with the master timestamp information from within the second timestamp report message of the same pair to determine a master clock offset from the slave clock of the slave nodes (col. 11, lines 40-57); and

adjusting the slave clock of the slave nodes to be synchronized with the master clock based on the master clock offset (col. 11, line 58 – col. 12, line 13).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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17. **Claims 4-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (US 5,974,056) (hereinafter Wilson) in view of Burns et al. (US 6,449,291 B1) (hereinafter Burns).
18. As for claim 4, although arguably inherent to Wilson, Wilson does not specifically disclose the use of timestamps for synchronizing the nodes. Burns teaches a method of providing synchronous transport of packets between asynchronous network nodes similar to claim 1, the method further comprising sending timestamp report messages in pairs from the master node to slave nodes at periodic intervals by:
- sending a first timestamp report message from the master node to the slave nodes (col. 4, lines 17-39; col. 11, line 13 – col. 12, line 13);
 - recording master timestamp information at the master node at a defined time during transmission of the first timestamp report message of a pair corresponding to the transmission of the first timestamp report message of a pair (col. 4, lines 17-60; col. 11, line 13 – col. 12, line 13); and
 - sending a second timestamp report message from the master node to the slave nodes which contains the master timestamp information (col. 4, lines 40-55; col. 11, line 13 – col. 12, line 13);
 - receiving timestamp report messages in pairs by the slave nodes from the master node (col. 4, lines 40-55; col. 11, line 13 – col. 12, line 13) by:
 - recording a slave timestamp at the slave nodes at a fixed time during reception of each timestamp report message to provide a recorded timestamp of the first timestamp report message at the slave nodes (col. 11, line 13 – col. 12, line 13);

comparing the recorded timestamp of the first timestamp report message of each pair at the particular slave node with the master timestamp information from within the second timestamp report message of the same pair to determine a master clock offset from the slave clock of the slave nodes (col. 11, lines 40-57); and

adjusting the slave clock of the slave nodes to be synchronized with the master clock based on the master clock offset (col. 11, line 58 – col. 12, line 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wilson by performing the steps above in order to synchronize clocks in a communication network while avoiding over-correction and stability problems, as taught by Burns (col. 3, line 61 – col. 2, line 16).

19. Claim 5 is rejected for the same reasons as claim 4 above. Although arguably inherent to Wilson, Wilson does not specifically disclose determining master clock offsets from received timestamp report message pairs. Burns teaches determining master clock offsets from received timestamp report message pairs (col. 11, line 13 – col. 12, line 13). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wilson by determining master clock offsets from received timestamp report message pairs in order to synchronize clocks in a communication network while avoiding over-correction and stability problems, as taught by Burns (col. 3, line 61 – col. 2, line 16).
20. Claim 6 is rejected for the same reasons as claim 4 above. Although arguably inherent to Wilson for transmitting the packets according to the schedule, Wilson does not explicitly disclose subtracting from the current master-connected synchronous network transmission opportunity a value representing the time required for the master node to receive, process and

forward packets from slave nodes to the synchronous network to yield a best arrival time.

Burns teaches subtracting from the current master-connected synchronous network transmission opportunity a value representing the time required for the master node to receive, process and forward packets from slave nodes to the synchronous network to yield a best arrival time (col. 11, line 13 – col. 12, line 13). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wilson subtracting from the current master-connected synchronous network transmission opportunity a value representing the time required for the master node to receive, process and forward packets from slave nodes to the synchronous network to yield a best arrival time in order to synchronize clocks in a communication network while avoiding over-correction and stability problems, as taught by Burns (col. 3, line 61 – col. 2, line 16).

21. As for claim 7, although arguably inherent to Wilson, Wilson does not explicitly disclose sending timestamp report messages intended for reception by the slave nodes which include the best arrival times. Burns teaches communicating from the master node to the slave nodes best arrival times for packets transmitted from slave nodes includes sending timestamp report messages intended for reception by slave nodes which include best arrival times with corresponding and slave node identification to allow slave nodes to determine which information is applicable to them (col. 2, lines 9-60). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wilson by sending timestamp report messages intended for reception by the slave nodes which include the best arrival times in order to synchronize clocks in a communication network while avoiding over-correction and stability problems, as taught by Burns (col. 3, line 61 – col. 2, line 16).

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22. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Holloway et al. (US 6,747,996 B2) (hereinafter Holloway).
23. As for claim 10, Wilson does not specifically disclose obtaining a fixed sequence of backoff values to be used during collision resolution. Holloway teaches using a fixed sequence of backoff values to be used during collision resolution (col. 6, line 54 – col. 8, line 12). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wilson by obtaining a fixed sequence of backoff values to be used during collision resolution in order to improve the quality of voice data transmission, as taught by Holloway (col. 6, line 54 – col. 8, line 12).

Double Patenting

24. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

25. **Claims 1-10** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 09/826,067 (hereinafter '067) in view of Wilson et al. (US 5,974,056) (hereinafter Wilson). '067 does not specifically recite the steps of determining best packet arrival and assembly times for transmitting the data packets as recited in claim 1 of the instant application. However, Wilson discloses these steps, as detailed in the 35 U.S.C. 102(b) rejection of claim 1 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify '067 by determining best packet arrival and assembly times for transmitting the data packets in order to transmit data efficiently over the network, as taught by Wilson (col. 1, lines 38-50).

All additional limitations of claims 1-10 are anticipated by claims 1-6 of '067.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

26. **Claim 11** is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 4 of copending Application No. 09/826,067. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 4 of '067 include all the limitations of claim 11 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

27. **Claim 8** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

WO 99/60755, note abstract;

US 6,259,677 B1, note packet transmission delay estimator and correction;

US 6,690,655 B1, note abstract;

US 6,611,519 B1, note cols. 4-6;

US 2002/0027886, note publication of application 09/826,067.

29. If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying

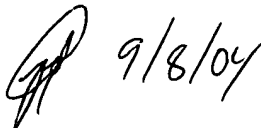
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the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (703) 305-4897. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 9/8/04
Aaron Perez-Daple

